

What is claimed is:

1. Apparatus for intermixing small objects and a liquid comprising at least one receptacle for receiving and retaining said small objects, at least a portion of said receptacle being permeable to permit said liquid to flow through said portion to intermix with said small objects when said receptacle is inserted into a vessel containing said liquid.

2. Apparatus for intermixing small objects and a liquid as set forth in claim 1 wherein said small objects are affinity beads and said liquid is a lysate containing proteins.

3. Apparatus for intermixing small objects and a liquid as set forth in claim 1 further including means for immersing said receptacle in said vessel a plurality of times.

4. Apparatus for intermixing small objects and a liquid as set forth in claim 1 wherein said receptacle is constructed of a material that is chemically inert with respect to said liquid and said small objects.

5. Apparatus for intermixing small objects and a liquid as set forth in claim 1 wherein said portion of said receptacle that is permeable is located at or near the bottom of said receptacle.

6. Apparatus for intermixing small objects and a liquid as set forth in claim 1 wherein said portion of said receptacle that is permeable is formed from a mesh having openings that are smaller than substantially all of said small objects to permit the flow of said liquid therethrough while retaining said small objects within said receptacle.

7. Apparatus for intermixing small objects and a liquid as set forth in claim 1 wherein said portion of said receptacle that is permeable comprises a substantial portion of the bottom or lower the lower sidewalls of said receptacle.

8. Apparatus for intermixing small objects and a liquid as set forth in claim 1 wherein said small objects comprise one or more living organisms.

9. Apparatus for intermixing small objects and a liquid as set forth in claim 8 wherein said liquid contains a stain or a pharmaceutical, or said living organisms are subjected to biochemical conditions, whose effect on said living organism is being studied.

10. Apparatus for intermixing small objects and a liquid as set forth in claim 1 wherein the interior of said vessel containing said liquid is larger than but similar in size to the exterior of said receptacle so that, when said receptacle is inserted into said vessel, the level of said liquid in said vessel is displaced to a substantially higher level to increase the liquid pressure at the bottom of said receptacle to force said liquid upwardly into said permeable portion of said receptacle.

11. Apparatus for intermixing small objects and a liquid as set forth in claim 1 wherein said small objects carry proteins and wherein said liquid contains an antibody which attaches to said proteins to cause immunoprecipitation.

12. Apparatus for intermixing small objects with a liquid comprising
a plurality of receptacles containing said small objects, each of said receptacles having a lower portion thereof that is permeable to permit the flow of said liquid therethrough,
a vessel containing said solution, and
means for repeatedly inserting said receptacles into said liquid in said vessel and then withdrawing said receptacle from said liquid to cause said liquid to first flow into said receptacle through said lower portion when said receptacle is inserted into said liquid and then to flow outwardly from said receptacle through said lower portion when said receptacle is withdrawn from said liquid.

13. Apparatus for intermixing small objects with a liquid as set forth in claim 12 wherein said liquid is a lysate containing proteins and said small objects are affinity beads to which said proteins become bound when said liquid and said affinity beads are intermixed.

14. Apparatus for intermixing small objects with a liquid as set forth in claim 13 wherein said portion of each of said receptacles that is permeable defines openings which are large enough to permit the flow of said lysate therethrough but smaller than substantially all of said affinity beads.

15. Apparatus for intermixing small objects with a liquid as set forth in claim 12 wherein said portion of each of said receptacles that is permeable defines openings which are large enough to permit the flow of said liquid therethrough but smaller than substantially all of said solid objects.

16. Apparatus for intermixing small objects with a liquid as set forth in claim 15 wherein said portion of said receptacle that is permeable is a mesh located at the bottom of said receptacle.

17. Apparatus for intermixing small objects with a liquid as set forth in claim 12 wherein said small objects are affinity beads and said liquid is a lysate containing a protein to purified.

18. Apparatus for intermixing small objects with a liquid as set forth in claim 12 wherein said small objects are living organisms and said liquid contains a stain or pharmaceutical whose effect on said living organisms is being studied.